

# Cleft palate children and intelligence. Intellectual abilities of cleft palate children in a cross-sectional and longitudinal study

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## 9. SUMMARY

This book presents the results of investigations concerning the intelligence of cleft palate children. It hopes to contribute to the discussion, because in the literature no consensus of opinion exists between the diverse investigators pertaining to various topics relating to the intelligence of cleft palate children.

In the first, introductory chapter, the differences in the impact of having a cleft lip and palate are stressed for persons in the Third World where life preservation is the main aim and for people in the rich Western World with its prestige morale where intellectual abilities and verbal expression are in the foreground.
A theoretical framework concerning cleft lip and palate presents several aspects that determine the burden of this malformation for both patients and parents.
The entourage in which the present study has been executed, is elaborated.

In the second chapter, some medical aspects concerning cleft lip and palate and the treatment schedule of the Groningen Cleft Palate Team are presented, ending up with the figures of the incidence of the anomaly in the three northern provinces of The Netherlands.

The literature is reviewed in the third chapter in a presentation analogous to the topics of the present study.

In the two methodologically most correct studies, mean IQs of 96 and 98 were found.

A marked difference between verbal and performance attainments was frequently encountered, indicating a deficient verbal development.

Comparisons between cleft palate children and controls often showed results in favour of the control children.

With regard to the diagnosis, it can be concluded that children with CL(P) often obtained higher scores than children with CPO.

No evidence for sex differences in either direction was found.

The only study discerning cleft type and sex subgroups concluded lower IQ-scores for the groups with the lower population incidence: MCPO and FCL(P).

An IQ-depressing influence of associated congenital malformations was established in the few studies that took this item into account.

The data concerning diverse aspects of the school attainments of cleft palate children remained inconclusive.

Various investigations into variables connected with speech proficiency and hearing sensitivity were largely divergent in their terminology and operationalization. The results were therefore incomparable and the relationship with the IQ remained obscure.

No significant differences in IQs at various ages were established in the only longitudinal study.

The scheme and organization of the investigations at four different ages are elaborated in chapter four.
The reasons for omittance of subjects and the composition of the total sample with its social characteristics are described, as well as the various assessment methods applied and the data on the reliability and validity of these tests.

The cross-sectional results form the contents of chapter five. The assessments at the age of ten months were not evaluated as reliable, which makes interpretation of the low DSI scores very difficult.

The scores at the other three assessment moments showed satisfactory reliability and yielded average to high-average outcomes. This pertained to the computations with both the inclusion and exclusion of mentally retarded subjects.

The nonverbal performances were on a higher level than the verbal attainments, but due to problems of a psychometrical nature, comparison of these results remained uncertain.

In chapter six, further considerations of the cross-sectional results are presented.

The results were calculated for children of the same year of birth to detect cohort effects, secular trends or effects in connection with action research. The scores did not increase or decrease in a consistent trend over the years, so probably neither effect was at work.

Comparisons with the siblings led to the conclusion that the cleft palate children had a similar general intellectual endowment as their siblings, but were lagging behind in their abilities for verbal development.

When divided into subgroups classified according to cleft type, the CPO group obtained the lowest scores. The results of the CLP group and the CLO group were comparable.

With the subdivision according to sex, the outcomes of the boys and girls were very similar.

The interaction between cleft type and sex was studied and yielded results that gave only support to the findings with the subgroups divided according to cleft type and did not confirm the genetic hypothesis concerning the lower population incidence expressed in discernable cleft type and sex groups.

When dividing the samples into groups with and without additional problems, the results classified according to the presence or absence of associated congenital malformations showed a very clear picture of consistently higher scores in the children who had no associated physical anomalies. Further research on this topic seems desirable. A plea is made for the development of a refined paediatric classification system for associated congenital malformations.

The division into children with and without school problems was perfectly concordant with the lower and higher IQs. The intellectual potentials were correctly valued by the school teachers.

Speech and hearing problems were shown to be associated with each other, but not with the nonverbal or verbal IQs. Neither with school problems nor with additional congenital malformations.

Comparisons in the longitudinal approach, presented in chapter seven, were made between children who performed the tests at the ages of ten months, five and seven years.

The three comparisons with the group at the age of ten months as starting point remained unsatisfactory because of limitations inherent to the composition of that sample that were also transfered to the samples at the ages of five and seven years: the absence of the complete group of children with an isolated cleft lip and the over-representation of children with associated congenital malformations asserted their IQ-depressing influences.
Moreover, the predictability of infant tests is considered limited and the comparability of assessment methods of a divergent nature seems questionable.

The groups that performed the tests at the ages of five and seven years had approximately the same composition. The differences between the nonverbal and verbal scores that existed at the age of five years remained the same and in the course of time no changes in outcome occurred: the nonverbal results were of average to high-average level; the verbal attainments showed average scores.

In chapter eight the general discussion is presented which attempts to answer the questions, raised in the introduction.

The old judgement concerning the intellectual impairment of cleft palate children as a group was not confirmed: in the present study they were found to have an average to high-average general intelligence with a slightly deficient verbal development.

In the individual approach, it was concluded that a cleft palate person with a type of cleft other than an isolated cleft palate and without associated congenital malformations, had the best chances for an average to high-average intellectual endowment and for optimal potentials to develop his capacities.